

# The Joint Services Systems and Software Technology Conference

## The Direction of the Global Information Grid

June 21, 2007  
Tampa, Florida

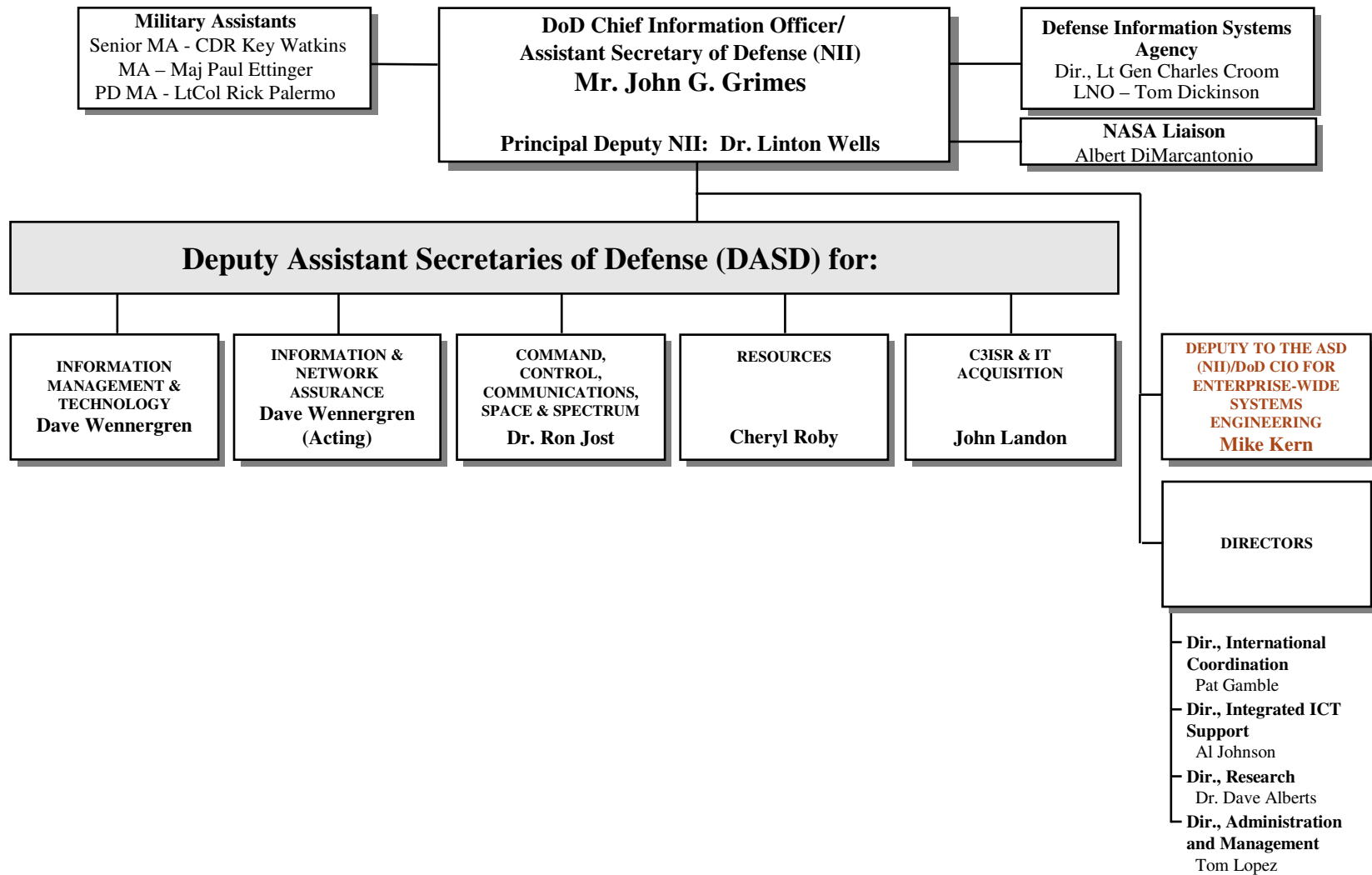


**EW**  
**SE**

Enterprise-Wide  
Systems Engineering

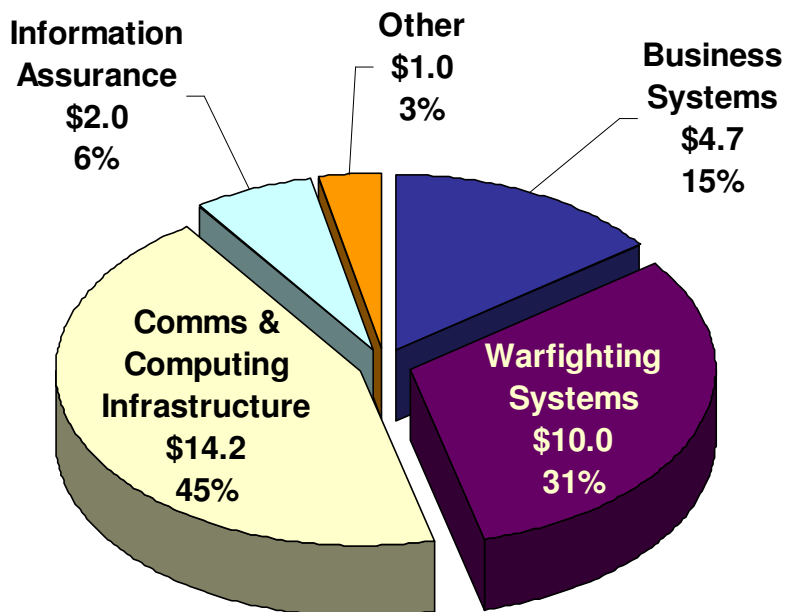
**Spanning the Government  
and the Globe**

# CIO/NII Organization

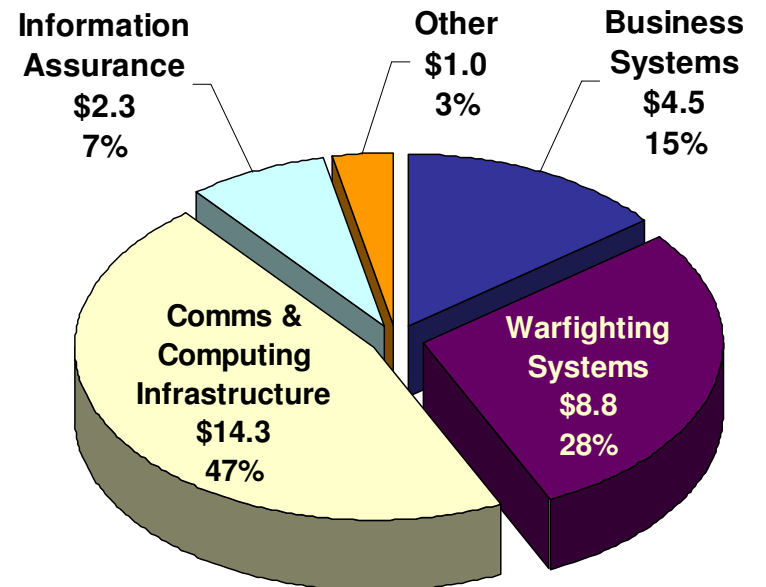


# DoD IT Budget (FY07PB)

(dollars in billions)



**FY 2006**  
**\$31.9**



**FY 2007**  
**\$30.9**



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# A Net-Centric Information Environment

“I can get the information I need”

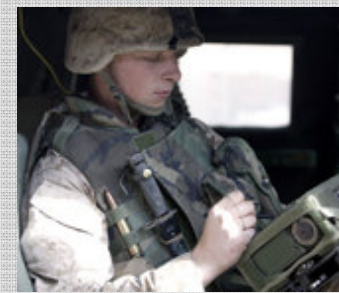
When I need it



Where I need it



How I need it



*“Uncertainty is the defining characteristic of today’s strategic environment”*

*National Defense Strategy*

*“...focus on providing the tip of the spear with the information and actionable knowledge to determine the best course of action...”*

*MG Peter W. Chiarelli  
CG, 1st Cavalry Division*

## What is the GIG?

- ▶ The Global Information Grid (GIG) is an **all-encompassing communications** project of the U.S. Department of Defense, with multiple partners.
- ▶ Defined as the **globally interconnected, end-to-end** set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policymakers, and support personnel.
- ▶ Includes all DoD managed communications and computing systems and services, software (including applications), system data, security services, and other associated services necessary to achieve **information superiority** for the United States military.
- ▶ The physical manifestation of the **Network-Centric** warfare doctrine.
- ▶ Envisioned by the DoD CIO on September 22, 1999
- ▶ Was **officially mandated** by an overarching directive from the Deputy Secretary of Defense on September 19, 2002



## The Move to Net-Centricity

### History = Rigid

Information stovepipes

“Welded” interfaces

Predetermined needs

Fixed display formats

Need to know

### Net-Centric = Agile

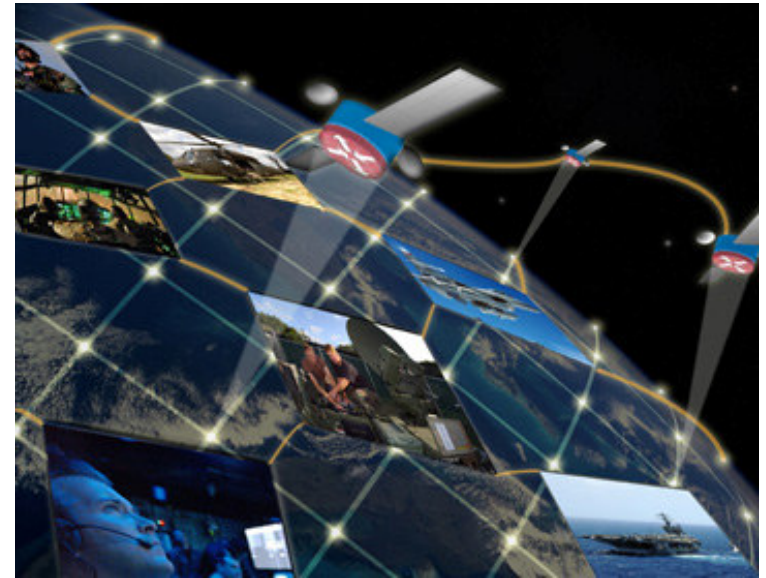
Shared information

Unconstrained

Unanticipated users

User-defined info and formats

Need to share; right to know



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## “Why Change?”

History shows —

- ▶ Cannot communicate across stovepipes
- ▶ Cannot meet spiraling information demands
- ▶ Cannot support unanticipated needs and users
- ▶ Is a Static vice Dynamic System with long deployments and large footprints
- ▶ Protects networks not data
- ▶ Lacks network mobility
- ▶ Information Assurance is a major concern

## We need a new approach!

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# The New Business Model: Implications for Industry *Managed Services and Service Oriented Architecture*

## CHANGING FROM THIS:

## CHANGING TO THIS:

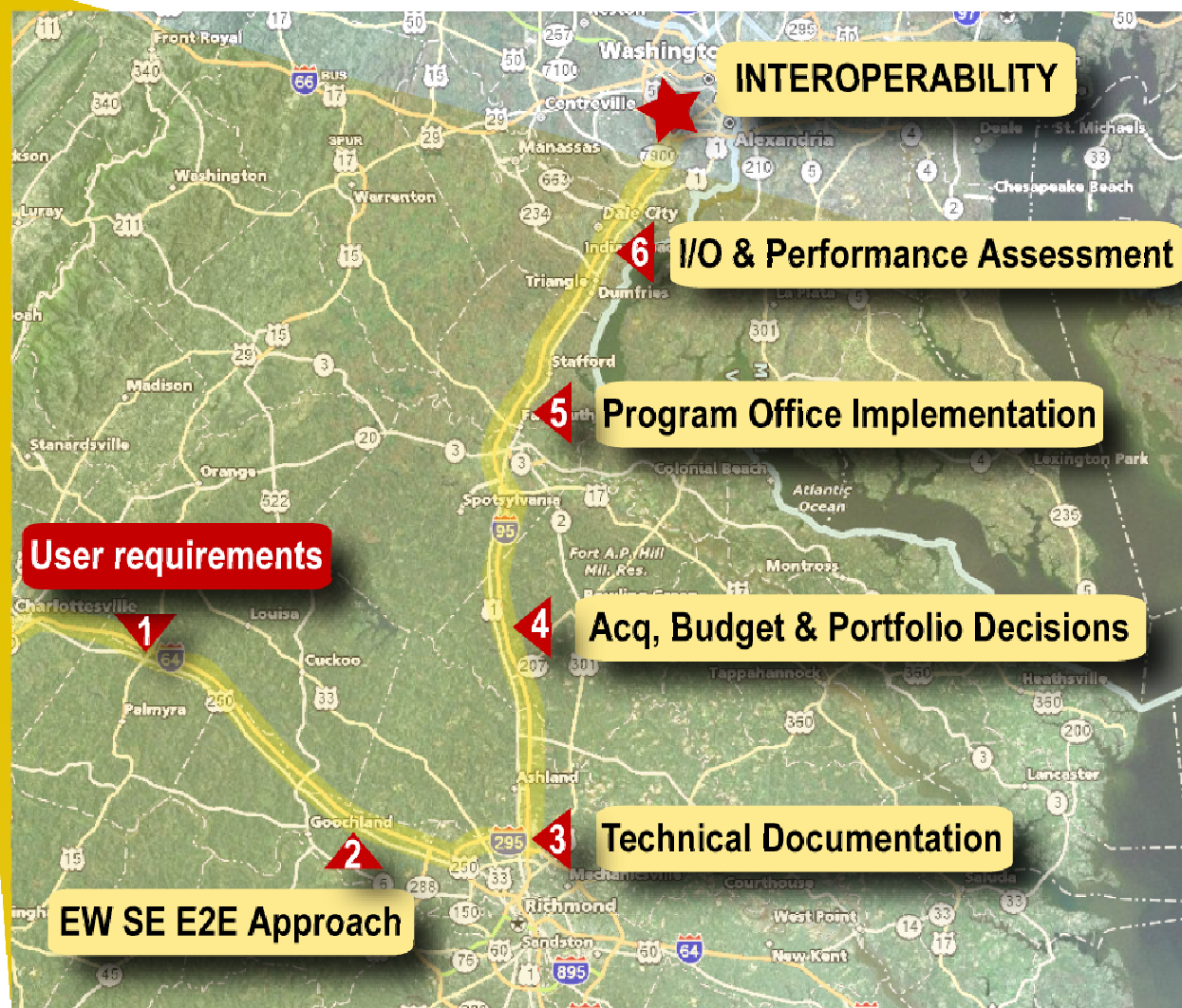
Build a Platform	→	Create an Environment
Buy “Things”	→	Purchase Managed Services
Own It	→	Use It
Application Focused	→	Data Driven
Closed Systems	→	Open Service Oriented Architectures
Proprietary Solutions	→	Common Standards
Stovepipes	→	Enterprise
Pre-Engineered Interfaces	→	Accommodate Unanticipated Users
Info Assurance After-the-Fact	→	Information Assurance Baked-In
Password Access	→	Attribute-Based Access

## CONFRONT UNCERTAINTY WITH AGILITY



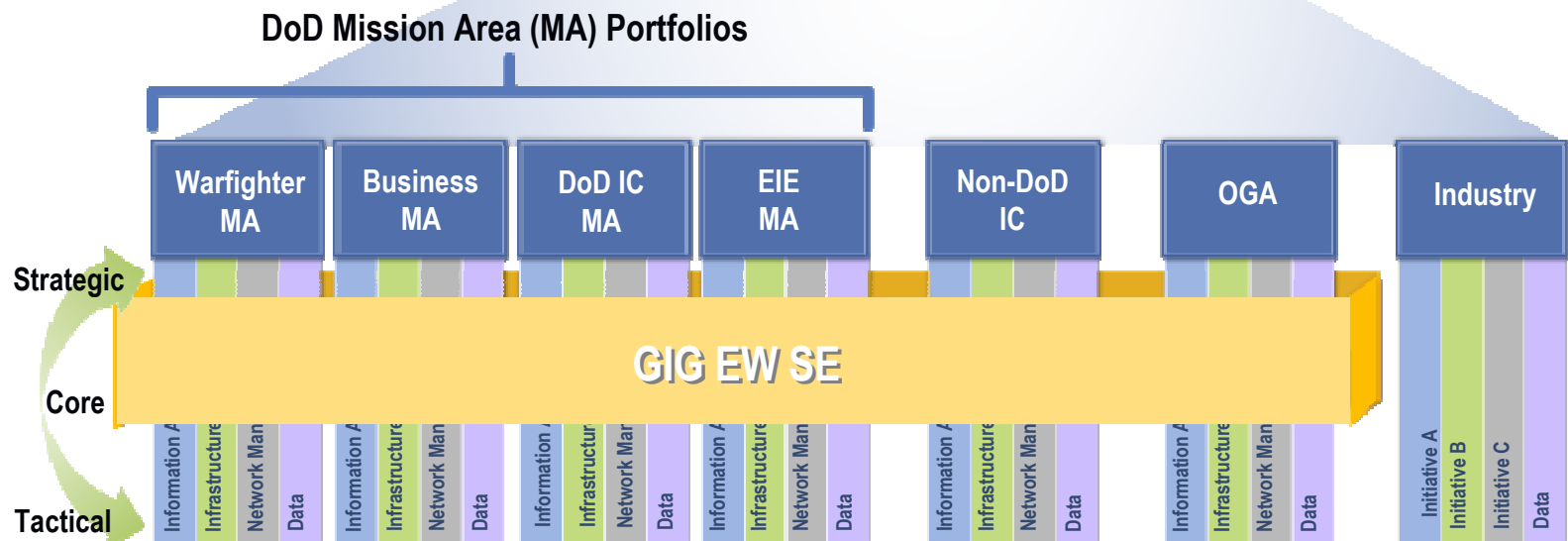
# The Road to End-to-End Interoperability & Performance is a Distributed Process

- Oversight & Policy provide the helicopter view and the how to



## GIG EW SE Environment spans across...

- ▶ The entire Federal Government
- ▶ Multiple programs and statutory authorities
- ▶ Many technical domains



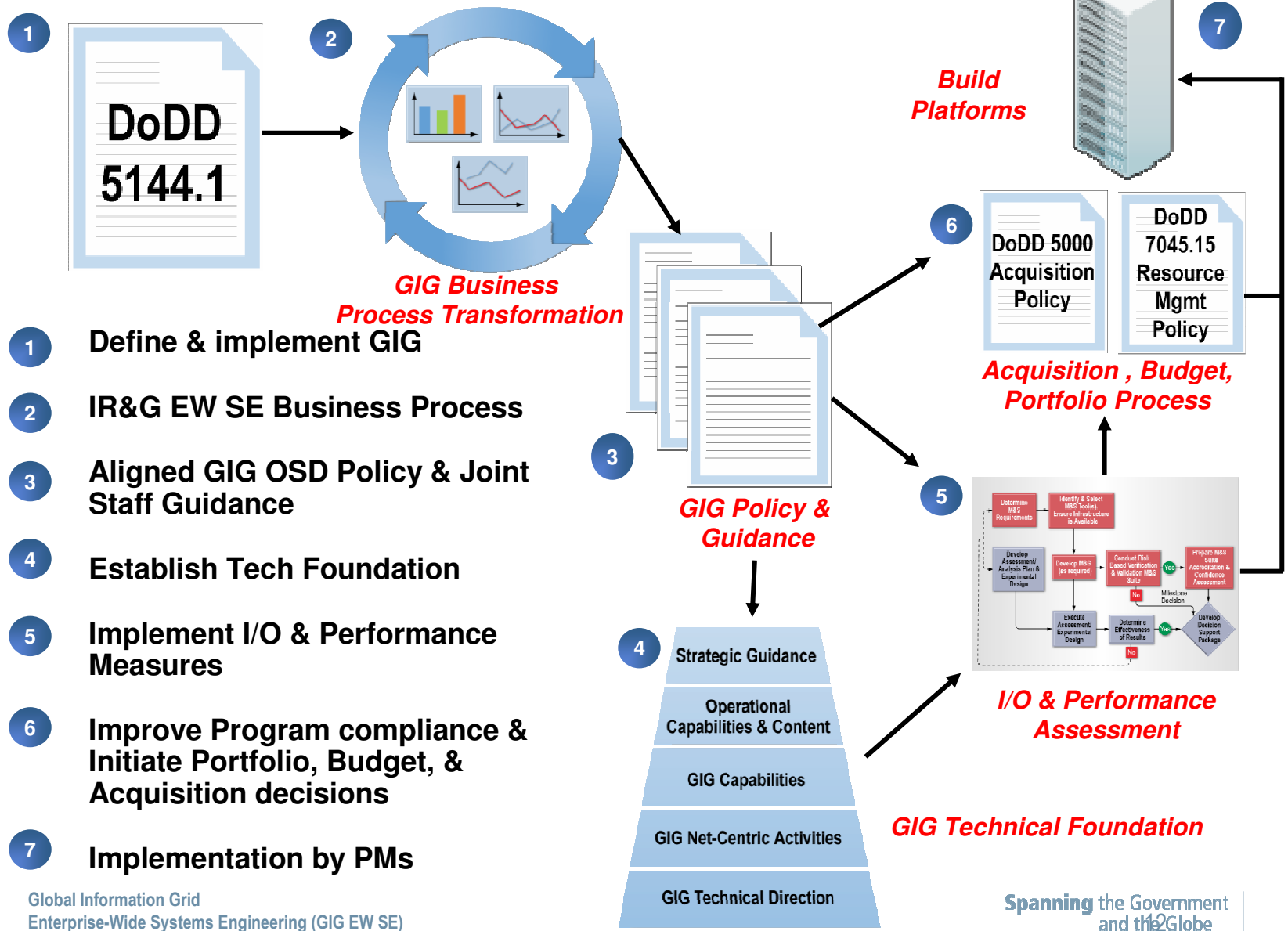
GIG EW SE is the “*connective tissue*” leveraging industry to foster technical convergence to the appropriate level of detail across these multiple arenas

# Enterprise-Wide Systems Engineering EW SE

- ▶ **Enables technical implementation** of the GIG across all levels of the DoD/IC/National/International arenas
- ▶ Provides the framework for the **federated interconnection** of GIG services and capabilities across the DoD and partner communities
- ▶ **Supports and transcends** enterprise DoD decision processes
  - Policy
  - Requirements
  - Acquisition
  - Budget
- ▶ **Develops and facilitates** Government and Industry relationships

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# GIG Business Process Improvements Within DoD IR&G Activity

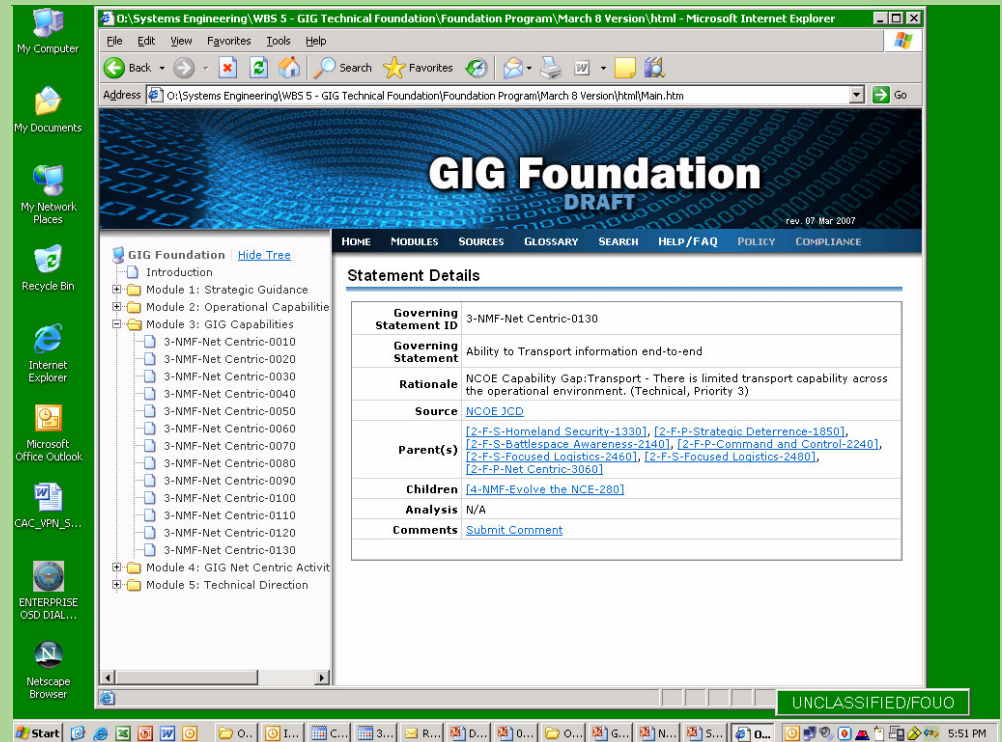




# Moving toward Web-based Service for Coordination & Compliance

## FOUNDATION NAVIGATOR

- Displays Governing Statements
- Links to Source Documents
- Provides traces to Parent & Children Governing Statements



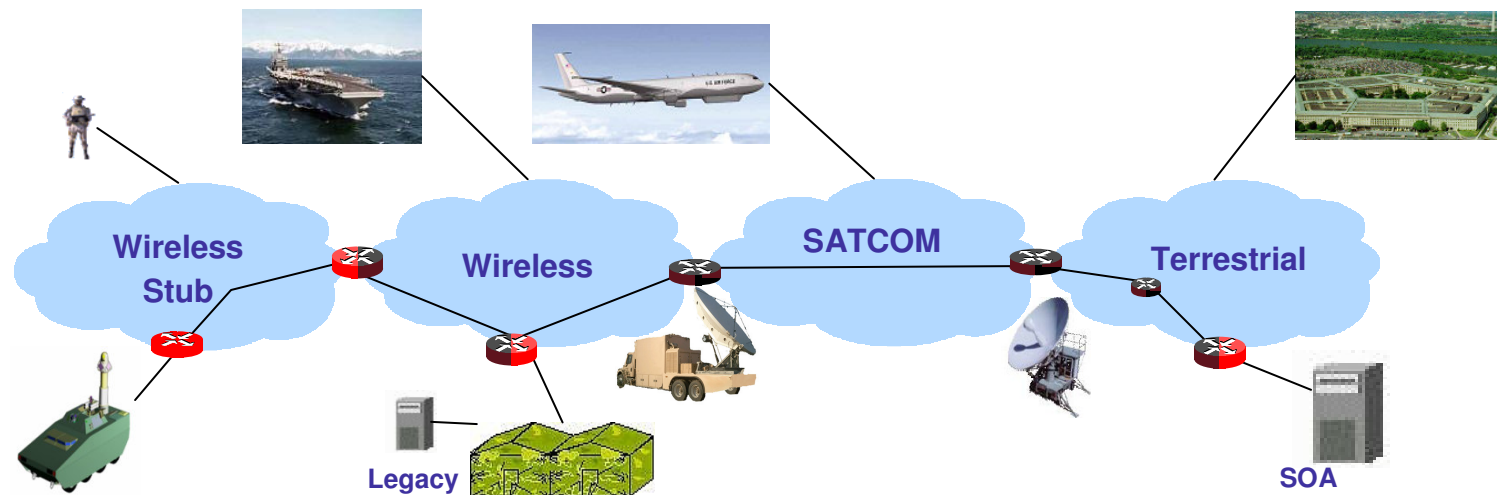
GIG Policy Interface

GIG Technical Foundation Interface

GTF I/O Compliance Assessment Interface



# Measuring a Program's Contribution to End-to-End Performance is part of the compliance review process



Component	Wireless	SATCOM	Terrestrial	Interconnects	Services	End-Users Req.
Pathfinder	JTRS SRW	TSAT	GIG-BE	Teleport	NCES	JIC
	JTRS WNW			Gateway		Program SoS
Legacy		TDMA/FDMA	Leased PTP		Legacy	ITU
		Mobile	NIPR/SIPR			
		IP DAMA				

Requirements  
Based

M&S  
Based

Standard  
Model

Monitoring  
Based

Place  
Holder

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## Enhancing the GIG Partnership

- ▶ Participation in both policy and technical discussions
  - The GIG DoD CIO Engineering Board
  - Senior GIG System Engineer meeting
  - GIG Senior Systems Engineering Board (SSEB) meeting
  - GIG End-to-end (E2E) SE Working Group meeting
- ▶ Establish stronger ties between DoD Enterprise Wide Systems Engineering and other organizations to better support the Warfighter mission
  - Identify specific requirements you would like to see covered in emerging GIG Technical Foundation
  - Leverage portfolios initiatives between the DoD and partner communities

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URL: <http://www.defenselink.mil/cio-nii/cio/ewse.shtml>

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## Questions?



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